some account of the Little Rocky Mountains, a region lying north of the main route of the party. The description of new fossils, by R. P. Whitfield, is accompanied by two plates.

Recent Geographical Progress. — First and foremost we have to mention the numerous scientific congresses: the periodical sessions of the International Congress of Geographical Sciences inaugurated at Antwerp, in 1871, and continued at Paris, in 1875; the periodical sessions of the International Geodetic Association, the last session of which was held at Bruxelles, in October, 1876; the Statistical and Prehistorical Congresses at Buda-Pesth, the Congress of Orientalists at St. Petersburg, and that of Anthropologists at Jena; and, further, the creation, since 1870, of numerous geographical societies, to wit: in 1870, at Bremen; 1872, at Buda-Pesth; 1873, at Halle, Kiew, Hamburg, Bern, Amsterdam, Lyons, and Paris (Society of Commercial Geography); in 1874, at Bordeaux (Society of Commercial Geography); in 1875, at Cairo, Bukarest, and Lisbon; in 1876, at Madrid, Marseilles, at Paris (Topographical Society), at Bruxelles and at Antwerp; finally, the International Association for the purpose of suppressing the slave trade and exploring Central Africa, due to the high initiative taken by H. M. King Leopold II., and constituted at Bruxelles, September, 1876. — Bulletin No. 1, Geographical Society of Belgium.

MICROSCOPY.

Fossil Diatoms from South Australia. — Mr. Galloway C. Morris, of East Tulpehocken Street, Germantown, Philadelphia, obtained from the commissioner in charge of the South Australian exhibit at the Centennial a small supply of a most interesting diatomaceous mineral called coorongite, from the Coorong District, in South Australia, where it is found. It is a mineral of a dark-gray or ash color, a light specific gravity, and a fine spongy texture, occurring in great quantities, and consisting of about twenty per cent. of a hydrocarbon which can be separated by distillation for economical purposes as an illuminating and lubricating oil, and a residue consisting mainly of fresh-water diatoms. It burns when heated on platinum foil, is permanent in the air, and is unaffected by moisture. It is not disintegrated in ether or chloroform, though most of the oily hydrocarbon is removed. Mr. Morris has succeeded best in preparing it for the microscope by boiling it in sulphuric acid with the addition of a small quantity of bichromate of potash to make chromic acid and give off the hydrocarbon as carbonic-acid gas. He has a few slides to spare, which he is willing to exchange for other mounted specimens.

Annual Reception. — The American Microscopical Society of the city of New York held a very successful invitation exhibition at Kurtz's art gallery, Madison Square, on Tuesday evening, March 6th.

Diphtheria. — This subject has been discussed at recent meetings

of the San Francisco Microscopical Society. Dr. A. M. Edwards, who was present as a visitor, introduced the subject, describing the growth and development of the fungoid growth which is observed in connection with the disease. He confidently believed that diphtheria is at first a local disease, caused and spread by the growth of these organisms, and that salicylic acid applied in the form of spray is capable of positively arresting the disease by destroying the organisms which caused it. He believed the microscope, especially by its moderately high powers, to be the only instrument able to decide this question, and that its revelations fully sustained the theory of fungoid growths as a cause of the malady. Dr. S. M. Mouser, a member of the society, contended that the membrane was an exudation consisting of epithelial cells in various stages of formation and disintegration, mucous and pus corpuscles, and spindle-shaped bodies distributed with some regularity, indicating organization of some kind, and regarded as fibre cells or smooth muscular fibres. He had not been able to detect anything that was certainly of a fungoid character. Dr. S. Laycock, of Edinburgh, had conceived the idea in 1858 that this disease was caused by a parasitic fungus, and the theory had been revived in Germany a few years ago, and salicylic acid used to destroy the fungus, but that treatment had now been abandoned, and the local application of warm water and steam substituted for it. Aitkin, Beale, and others have considered the fungoid growths to be only accidentally present, and not a cause of the disease. The speaker believed it to be the generally received opinion of the medical profession at present that the disease is constitutional in its character, and that this theory is not disproved by microscopical observation.

Personal. — Wm. H. Walmsley, one of the best-known cultivators of microscopy in this country, retired on the first of April from the firm of Jas. W. Queen & Co., of Philadelphia. After the completion of his present European trip he expects to be able to open an American branch of "R. & J. Beck," with such a stock and at such prices as were never before seen in this country. In his new enterprise he will at least have the good will of all who have had previous dealings with him, which probably includes nearly all our microscopists.

Rock Sections. — Alexis A. Julien, of the School of Mines, Columbia College, 50th Street and 4th Avenue, New York City, is preparing to order microscopic sections of rocks, minerals, and other hard substances, and intends shortly to keep on hand series of sections of American rocks and minerals. The sections are prepared with care and judgment, and at a cost of sixty cents each except for specially large or difficult objects. If so ordered they will be mounted on the standard plate glass slides 3x1 inch, but this size is not advised on account of their thickness, $\frac{1}{16}$ inch, preventing proper illumination under high powers by achromatic condenser, inconvenient length preventing ready rotation on small stages, liability to fracture, etc. Thinner plate glass slides ($\frac{3}{64}$ to

$\frac{1}{32}$ inch) are preferred, of the size adopted by Fuess of Berlin ($1\frac{25}{32}$ by $1\frac{1}{16}$ inch), and these, with covers of medium thinness and $\frac{7}{8}$ inch square, will be used unless otherwise ordered.

A New Students' Microscope. — The increasing importance of cheap and portable microscopes, and the increasing demand for good instruments specially adapted to work in histology and pathology, has lately led all our prominent makers to introduce so-called students' microscopes of excellent quality and remarkable cheapness. The latest work of this kind is the new students' microscope of Mr. Joseph Zentmayer, of 147 South Fourth St., Philadelphia. This stand is a truly American model, in which the standard English and continental styles which have served as models so long, are nearly lost sight of, and the recent very important contrivances of Mr. Zentmayer are introduced almost as effectively as in his superb first class stand. The base and hollow upright column are cast in one piece, giving great lightness and firmness combined. The mirrors and substage, together, swing around the object, so that it can be readily kept in focus of the illuminating apparatus at any desired angle; and the bar can be swung so as to carry the whole illuminating apparatus above the stage for opaque objects. There is a good substage which can easily be removed entirely when desired. The stage is thin and beveled, so that extreme obliquity of illumination can be obtained by simply turning the stand or swinging the mirror. The diaphragms are mounted on the substage, and can be brought up close to the object-slide if desired. The coarse adjustment is by a sliding tube, and the fine adjustment by a screw and lever moving the whole body on a long sliding support exactly like that of the rack movement in the common Jackson stands. The stage is only three inches from the table, and the tube is correspondingly short, though capable of lengthening by draw-tube to the standard length. The whole stand is a marvel of neatness, compactness, stability, and convenience. At the request of the writer, a stand has been made with a specially adapted achromatic condenser and with a thin concentrically revolving stage like the diatom stage of the maker's "centennial" stand, which is worthy of being furnished with the highest class objectives and is capable of doing almost anything that the most elaborate stands can do.

Practical Microscopy. — Rev. E. C. Bolles, an unsurpassed lecturer on the subject, has consented to give instruction in microscopy at the second session of the summer school of biology, which will be opened at the Museum of the Peabody Academy of Science, at Salem, Mass., on the 7th of July next. The term lasts seven weeks. A course of lectures and demonstrations on Animal Histology, will also be given by Mr. C. S. Minot. The admission fee is $15.00.

Boston Microscopical Society. — This society held its second annual reception on Friday evening, April 27, with a programme of re-

marks by Prof. Oliver Wendell Holmes, a screen exhibition of Polariscope objects, by Rev. E. C. Bolles, and an exhibition of objects under about sixty microscopes by members of the society. The society has recently rented and furnished rooms at 29 Pemberton Square, and is working with perseverance and increasing success to unite and assist those, within its reach, who are interested in microscopical study.

SCIENTIFIC NEWS.

— The interest in geographical research continues to increase in France from year to year. The Société de Geographie of Lyons has published six numbers of its Bulletin, all full of interesting matter. A handsome volume has just been printed by this society entitled A Geographical and Statistical Study of the Production and Commerce of Cocoon Silk, by Leon Clugnet. This memoir was crowned by the Geographical Society. The president of the society is desirous of coöperating with geographers of foreign countries in popularizing the study of geography. He proposes a place for exhibiting in public places the most important geographical statistics of any desired region so that the people may read them at all times, and thus become familiar with them. The first number of the Bulletin of the Société Belgée de Geographie, published at Brussels, has just appeared. The leading article by the president, General Liagre, on Geographical Science, is one of great interest. There are seven articles with maps in this number, and a long list of members actual, honorary, and corresponding. The objects of the society, as laid down in the Bulletin, are exceedingly comprehensive, embracing every possible form of geographical information.

— The first number of the third volume of Hayden's Bulletin of the United States Geological Surveys of the Territories is rich in articles relating to the anthropology and archæology of the West, as may be seen by the following table of contents: A Calendar of the Dakota Nation, by Bvt. Lt. Col. Garrick Mallery, U. S. A. (Plate 1.) Researches in the Kjökkenmöddings and Graves of a Former Population of the Coast of Oregon, by Paul Schumacher. (Plates 2–8.) Researches in the Kjökkenmöddings of a Former Population of the Santa Barbara Islands and Adjacent Mainland, by Paul Schumacher. (Plates 9–22.) The Twana Indians of the Skokomish Reservation in Washington Territory, by Rev. M. Eells. (Plates 23–25.) Notes on a Collection of Noctuid Moths made in Colorado, in 1875, by Dr. A. S. Packard, Jr., by Aug. R. Grote. The Tineina of Colorado, by V. T. Chambers. Notes on a Collection of Tineid Moths made in Colorado, in 1875, by A. S. Packard, Jr., by V. T. Chambers. On the Distribution of Tineina in Colorado, by V. T. Chambers. New Entomostraca from Colorado, by V. T. Chambers. On a New Cave Fauna in Utah, by A. S. Packard, Jr., M. D. Description of New Phyllopod Crustacea from the West, by A. S. Packard,